

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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COUNTRY	Poland	REPORT		
SUBJECT	Production Data on the State Automobile Factory in Jelcz (Jeltsch)	DATE DISTR.	23 Februar	у 1955
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ARMY review completed.

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25 YEAR RE-REVIEW

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1. General

The factory had three main departments, which were designated Experimental Department I, Body Construction Department II, and Vehicle Repair Department III; the latter performed vehicle maintenance and repair for civilian agencies.

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The Experimental Department was exclusively engaged in producing the technical specifications for the construction of prototypes and the actual production or prototypes. Employing one daily eight-hour shift, this department was capable of producing six vehicle-prototypes per month.

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The Body Construction Department produced the vehicle bodies and completed the final assembly of the vehicles after the prototypes had been approved. Employing a maximum of two daily eight-hour shifts in some of the sections of the department, it was capable of producing about 200 vehicle bodies per month and assembling them on chassis. Normally, one eight-hour shift was utilized in the remaining sections of this department.

The Vehicle Repair Department was engaged in overhauling and repairing state-owned vehicles. Employing one daily eight-hour shift, this department overhauled and/or repaired approximately 180 Star-20 vehicles per month. In addition, about 60 other vehicle engines and about 10 GAZ-M20 (also called "Warszawa") vehicles were repaired during the month.

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2. Products and Output

a. Chassis

During 1953-54, the factory was primarily engaged in the production of prototype bodies, largely for maintenance vehicles. These bodies were subsequently produced in limited quantities and mounted on the chassis listed below. (Note: None of the chassis were produced at the factory

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(1) Soviet-Manufactured

ZIS-150 chassis, 4.4 tons, 4 x 2 ZIS-151 chassis, 4.5 tons, 6 x 6 GAZ-51 chassis, 2.7 tons, 4 x 2

(2) Polish-Manufactured

Star-20 chassis, 3.5 tons, 4 x 2 P3 chassis, (trailer), 3 tons ("P" indicated Polish)

Further details on the Stars 20 chasts: sis:

Engine:

Manufacture, model, bore, stroke and displacement - unknown Type - Six-cylinder in-line, OHV, gasoline Brake horsepower - about 85 rpm

Characteristics:

Fuel capacity - 115 liters Cooling system capacity - 11 or 12 liters Crankcase capacity - 8.5 liters Transmission - Unk. Differential - Unk.

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Vehicle weight - Approx 4 tons Payload - 3.5 tons Axle-gear ratio - Unk. Axle loads - Unk. Tires - 8.25 x 20 or 8.50 x 20 Overall length - Approx 5.70 m. Overall height - Approx 3.40 m. Overall width - Approx 2.20 m.

Performance Data:

Cruising range - 400 km
Fuel consumption - 27 liters per 100 km
Maximum rated speed - 85 km per hour
Fording depth - Unk
Transmission - Four forward and one reverse

(3) Czech-Manufactured

Skoda 706R chassis, 7.5 tons, 4×2

Additional data on the Skoda 706R chassis:

Engine:

Manufacturer - Skoda Works, Czechoslovakia Model - Unk Type - Six-cylinder in-line, diesel Brake horsepower - 145 hp at 2,000 rpm Bore, stroke and displacement - Unk

Characteristics:

Fuel capacity - Approx 120 liters
Cooling system capacity - Approx 15 liters
Crankcase capacity - Approx 12 liters
Vehicle weight - Approx 6.5 metric tons
Payload - 7.5 tons
Tires - 1250 x 20
Overall length - Approx 7.80 m.
Overall width - Approx 2.35 m.
Overall height - Approx 3.40 m.
Brakes - Air
Working pressure of brakes - 5½-6½ atmospheres

Performance Data:

Cruising range - 400 km.

Maximum rated speed - 75 km per hr.

Fuel consumption -22 liters per 100 km.

Fording depth - Approx 1 meter

(4) East German manufactured

IFA-8 chassis (trailer), 8-ton (Meaning of IFA was not known

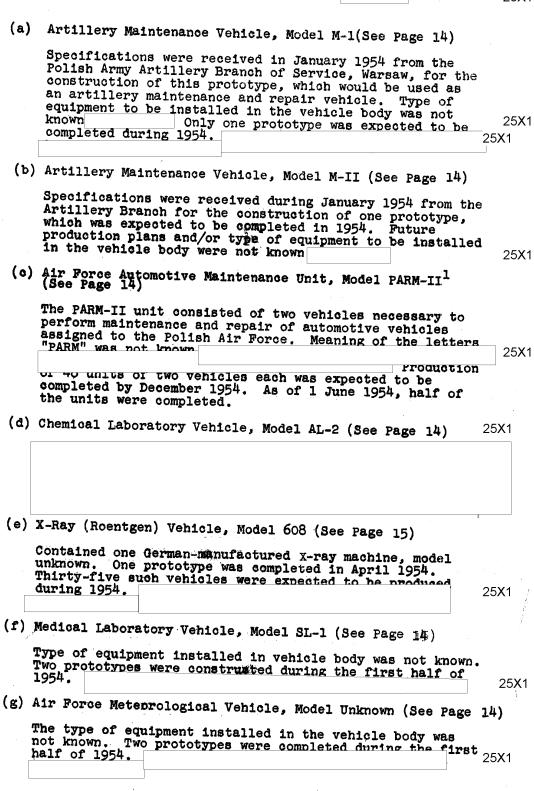
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b. Vehicles and Vehicle Prototypes3

(1) The following vehicles were either planned for assembly or were assembled, utilizing shop body #103, mounted on a ZIS-150 4.4-ton, 4 x 2, cargo truck chassis.

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(h) Automotive Maintenance Vehicle, Model 220 (See Page 14)

The type of equipment installed in the vehicle body was unknown. About 110 vehicles were produced during 1954, and an additional 40 were expected to be produced by December 1954 and consigned to the military forces for use in the maintenance of military vehicles.

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(1) Radio Vehicle, Model Unknown (See Page 14)

radio receivers and transmitters
installed in the vehicle body; type, manufacture, or other
details were not known. About 45 vehicles were produced
during 1953 and consigned to the military authorities.
Fifteen additional vehicles were ordered by the military
authorities for production during 1954, but production
of them was not expected because they were not included
in the factory's 1954 production plans.

(j) Artillery Automotive Maintenance Vehicle, Model 222 (See Page 14)

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The type of equipment for maintenance of artillery vehicles installed in body was not known About 114 25X1 vehicles were planned for production during 1954

(k) Engineer (Sapper) Maintenance Vehicle, Model 223 (See Page 14)

Equipment installed in the vehicle body consisted of an air compressor, circular wood saw, and a variety of maintenance tools. About 56 vehicles were produced during 1954. Future production plans were unknown.

(1) Command and Staff Vehicle, Model AS-254 (See Page 16)

Equipment installed in the vehicle body consisted of field desks and drawers. About 78 vehicles were produced during the first half of 1954. Future production plans were not known.

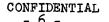
(m) Field Printing Unit, Model Unknown (See Page 14)

The field printing unit was to be installed in two vehicles; one vehicle was to contain the field printing press and the other vehicle the type, letters, and other equipment necessary to complete the unit. The field printing press and equipment was to be installed at the factory but had not arrived as of June 1954. One prototype of each vehicle was produced during 1954; future production of such vehicles was not expected.

(n) Tank Maintenance Vehicle, Model Unknown (See Page 14)

The type of equipment to be installed in the vehicle body was unknown

About 72 vehicles were produced 25X1 during the first half of 1954.



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- (2) The following vehicles were assembled at the Jelcz factory from GAZ-51 chassis and #103 shop bodies. The shop bodies were produced at an automobile factory in Nysa (Niesse) (N 50-30, E 17-20) and then sent to Jelcz for assembly:
 - (a) Ambulance Vehicle, Model Unknown (See Page 19)

The vehicle body contained spaces for six patients. Production of the prototype plus 116 vehicles was anticipated for 1954. Delivery of the vehicles was to be made to the armed forces.

(b) Field Printing Unit, Model Unknown (See Page 19)

The field printing unit was made up of two vehicles. A field press (model unknown) was to be installed in the body of one vehicle, and the typeset plus the equipment necessary to operate the press was to be installed in the other. Only one prototype of each vehicle was anticipated for 1954. Further production was not anticipated for the year.

(c) Water Purification Vehicle, Model Unknown (See Page 19)

The type of equipment to be installed in the vehicle was not known The P-3 trailer (see Page 20) 25X1 was to be towed by the vehicle and was to be used for the transportation of an open waterproof canvas container which had a capacity of 3,000 liters. The container had not been produced due to faulty canvas. Tests to improve the material were being conducted at the Jelcz and Nysa factories. Only one prototype of this vehicle was to be produced during 1954.

- (3) The following vehicles were assembled at the factory, utilizing shop body #104, and mounted on a SKODA 706R chassis.
 - (a) Automotive Maintenance Vehicle, Model M-VIII (See Pages 22 & 23)

 The equipment of this vehicle consisted of one planer, one lathe, and a wooden work bench with 35 drawers.

 Further details were not known Four vehicles 25X1 were expected to be produced during 1954.
 - (b) Automotive Maintenance Vehicle, Model M-IX (See Pages 22 & 23)

 Equipment consisted of one shaper, one lathe, one drill press, one air compressor, and a wooden work bench with 25X1 35 drawers. Further details were unknown Four vehicles were expected to be produced during 1954.
 - (c) Aircraft Maintenance Unit, Model PARM IV (See Pages 22 & 23)

The PARM IV (meaning of PARM unknown unit consisted of four vehicles, which could perform the complete maintenance and repair of propeller-driven aircraft. An automotive factory in Warsaw received orders to produce the prototypes about 1951, but these were not accepted by the Polish Air Force because they did not conform to specifications. The unaccepted prototypes were then sent to the automobile factory at Jelcz for body modification and completion. The prototypes plus two additional units, with the exception of vehicle #3 for which equipment was lacking, were completed by July 1954. ______ described the four vehicles of the 25X1 PARM IV as follows:

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25X1 1. Vehicle #1, Mechanical, Model 250 (See Pages 22 & 23) Equipment installed in the vehicle body consisted of one wooden bench with approximately 35 drawers; one lathe, type unknown; one bench drill press; one grinder, type unknown; and one three-kilowatt transformer. 25X1 2. Vehicle #2, Carpentry, Model 251 (See Pages 22 & 23) Equipment consisted of one wooden bench with 35 drawers, woodworking machinery, and one three-kilowatt transformer. 25X1 Vehicle #3, General Aircraft Maintenance, Model 252 (See Pages 22 & 23) The equipment consisted of one wooden bench with 35 drawers, one three-kilowatt transformer, and sufficient storage space for about 200 small mechanical parts necessary for the repair of an aircraft. 25X1 4. Vehicle #4, Mechanical, Model 253 (See Pages 22 & 23) Equipment consisted of one wooden bench with 35 drawers; one three-kilowatt transformer; one planer; one lathe; one welding unit, gas; one welding unit, electric; one portable grinder; one cylinder boring machine; and one cylinder lapping machine. Further details were unknown. A one-ton trailer was also included in the PARM IV unit and was used to transport one 10 kilowatt electric generator, which provided the necessary electrical power to operate the electrically driven equipment in the vehicles. The trailer also transported a large field tent, dimensions unknown, which was to be used in the field as a work shop. Future production was unknown shop body #108 (see Pages 24 We 25) would be used in the future rather than shop body #104 (see Pages 22 & 23) because of its greater length. (4) Trailers (a) Engine Test Stand, IFA-8 (See Page 26) the chassis for this trailer was produced in Zwickau (N 50-44, E 12-30), East Germany, and shipped by rail to the factory, where the trailer 25X1 bed and equipment were mounted. 25X1 vehicle engine test stand was mounted on the trailer and that the stand was used to test automotive engines after they were overhauled or repaired. The trailer, with body and engine test stand, was designated as model S-VI. 25X1 (b) Crankshaft Grinder (See Page 27) 25X1 trailer as a special construction on which a crankshaft grinder was to be mounted. The crankshaft grinder was not available in Poland and would probably have to be imported from another country. Three leveling jacks were to be put on the trailer to support and steady the trailer bed while the grinder was being operated. 25X1

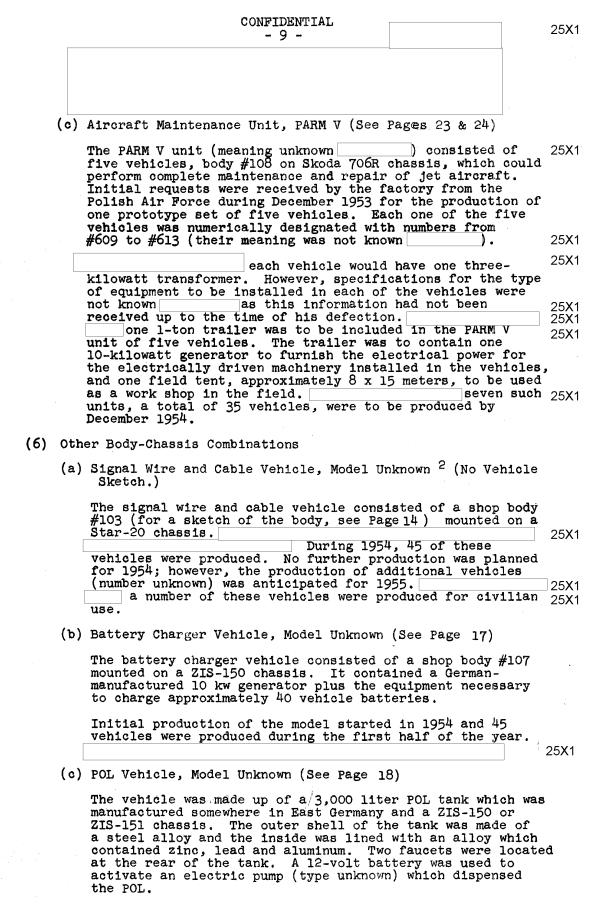
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The state of the s

CONFIDENTIAL - 8 -25X1 (c) Field Kitchen 25X1 field kitchen, mounted on a one-ton trailer, as being identical to a Soviet field kitchen used during World War II. Two prototypes were completed in 1954 and delivered to the military authorities for field tests preliminary to acceptance. Approximately 112 field kitchen trailers were expected to be produced during 1954. (d) Furnace Trailer (See Page 20) a metal heat treating furnace (type 25X1 unknown) was to be installed in an unknown number of P-3 trailers and designated as model S-IX. 25X1 (e) Blacksmith Shop (See Page 21) Consisted of a shop body #105 mounted on a P-3 trailer. Source did not know the type of equipment that was installed inside. Approximately 15 of these vehicles were produced from January to April 1954. 25X1

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CONFIDENTIAL 25X1 - 10 -In 1953, 1280 POL vehicles of this type were assembled and delivered to military authorities at the factory for consignment to appropriate air force and military units. By May 1954, an additional 1,000 vehicles were produced but future production plans were not known 25X1 (Note: Experiments were being conducted with "Vinidur" for use as a liner inside the tanks. Tanks lined with "Vinidur" were to be installed on GAZ-51, ZIS-150, Star-20 and P-3 chassis.) Military Production Approximately 90% of the vehicles produced during 1953-54 were consigned to the military, and about 10% were produced for civilian use (this percentage consisted largely of Star-20 chassis). (See RC-2375.) Production Costs the vehicle productions costs were greater in 1953 25X1 than in 1954. He attributed this to lack of materials, tools, equipment and the fact that many items had to be hand-made. The production cost of one prototype was estimated to be three times greater than the cost involved in the production of one subsequent vehicle body and assembly. 25X1 the complete construction cost of one vehicle body and assembly on the vehicle chassis averaged from 78,000 to 250,000 zlotys. Heavy equipment installed in the vehicle body was not included in these figures (costs figures were purely estimates, 25X1 no factual information.) 25X1 25X1 there were no wastes or rejects. Any vehicle that was rejected by the military authorities due to poor frame work, metal or lack of space for equipment, was modified and consigned to a state civilian agency. During 1953, about 8% of the produced vehicles were rejected by the military authorities, and during 1954, about 2% were rejected. These vehicles were rejected because of poor construction, material, and second grade lumber being used. Tools and Equipment During 1953, a large number of the items used in the construction of prototypes were hand-made. prototypes were hand-made. during 1954, the factory 25X1 received an assortment of modern dyes, jigs, and tools, and that approximately 70% of the items which were hand-made during 1953, were being produced by machines in 1954. The factory had an unknown number of small and large drill presses, shapers, planers, grinders, tin cutters, sheet metal presses, several 120-ton and two 100-ton metal presses, to produce steel frames for vehicle bodies.

Production Bottlenecks

verted to military use in time of need.

Rejects

some of the production bottlenecks as lack of first 25X1 class lumber, steel, bronze, copper, metal screens, wrenches, hammers, and drills. The largest bottleneck was attributed to 25X1 the lack of authority to make decisions whenever production was suspended

military requirements, whereby the vehicles could be immediately con-

all vehicular designs and production included certain

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25X1

due to the shortage of some small item. Another bottleneck was the process involved in the preparation of the technical documentations and sketches, and the production of vehicles for the military forces, outlined as follows:

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- a. The military forces submitted their vehicle requirements for the subsequent year to the Ministry of Road and Air Transportation, and also to the factory at Jelcz.
- b. After reaching an agreement with the Ministry of Road and Air Transportation, the factory included the military's requirements in their production plans for the subsequent year.
- c. The Experimental Department adhered to a monthly work plan and in one of the subsequent months prepared preliminary plans (drawings), based upon the military's technical requirements and in direct understanding with the military representatives. The plans were then submitted to the military representatives for acceptance. The average time required to prepare the preliminary plans by the experimental department ranged from one to two months. Acceptance of the plans by the military averaged 15 days.
- d. The accepted and approved plan could contain certain modifications or additional requirements by the military representatives.
- e. Upon receipt of the plan, the construction section of the Experimental Department produced the technical specifications for the prototype. The time element involved in this stage averaged about four months.
- f. The prototype technical documentations were then submitted to the prototype department for construction of the prototype. The time element involved averaged from three to four months.
- g. The completed prototype was accepted by the factory's Military Commission #82, and consigned to the proper military officials for field tests. These field tests averaged about one month and, in exceptional cases, even several months.
- h. The prototype was then returned to the factory with an approval or with certain desired modifications, which were subsequently made. The factory's Military Commission #82 inspected and approved the completed prototype at the factory.
- 1. Upon approval of the prototype, the experimental department worked out the technical specifications for the production of a test series. The time for this step was approximately three months.
- J. The completed technical specifications and sketches for the test series were then submitted for approval to the military forces via the factory's Military Commission #82. The time element for acceptance of the completed technical specifications for the production of test series ranged from one to three months.
- k. Upon approval of the technical documentations, five complete sets of prints were to be made, which were to be used the preparing to produce the test series. The time element for this averaged from three to four months.
 - The factory's Military Commission #82 accepted the completed test series and consigned them to respective military units according to its directives.

CONFIDENTIAL - 12 -25X1 After a three to six-month field testing of the test series by m. the military, the factory received an approval or a statement of modifications necessary before the test series vehicles could be approved. The final drawings of technical specifications and sketches were n. normally made on a cloth-like paper. However, as of 1 July 1954, the final technical specifications had not been produced for any type of vehicle. The factory's Military Commission #82 had the authority to inspect 0. at any time, the preparation of technical specifications (to insure that its technical requirements were being met) and the actual production of vehicles intended for the military forces. The technical specifications, as well as all the correspondence pertaining to military vehicles, were considered classified information and were usually transmitted to various offices outside the factory by the Office of Public Security officers (UBP - Urzad Bezpieczenstwa Publicznego), stationed at the plant. 25X1 (The process involved in the production of civilian vehicles was different, in that the State Commission for Appraising Automotive Transportation acted upon the final technical specifications and gave the approval for production of vehicles.) Future Production Based on conversations with the factory's directors, 25X1 future production of vehicles for the military service would be 25X i very limited. An estimate of a total of 250 vehicles was planned for future production for 1955, which would consist of only 13 types. The shop body #103, mounted on a ZIS-150 vehicle chassis, was to be the standard vehicle produced for the military. The bulk of the factory's production for the future was to be civilian. 25X1 The director of Experimental Department-I told 25X1 vehicle bodies would be produced from metal instead of wood. During 1954, the factory had received the technical requirements desired by the Motor Transport Branch of Service, Warsaw, concerning the construction of all metal bodies mounted on a ZIS-150 chassis. two prototypes of a Star-20 vehicle with an all-metal body were 25X1 scheduled for production during 1954. 25X1 no knowledge concerning the factory changes and/or equipment needed in order to produce all metal bodies. (For a production resume, see Pages 28 & 29) Conversion to War Production 25X1 opinion that in time of war, the factory could easily be converted to produce all types of small arms ammunition, small arms, some tank parts, in addition to various types of military vehicles. Shipment of Materials The factory had about 35 Star-20 vehicles, which were used to transport raw materials and lumber from other factories in Poland. The major portion of the factory's materials, supplies, lumber and vehicle chassis,

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All vehicles produced for the military

was shipped to the factory by rail from all parts of Poland. the HSSR

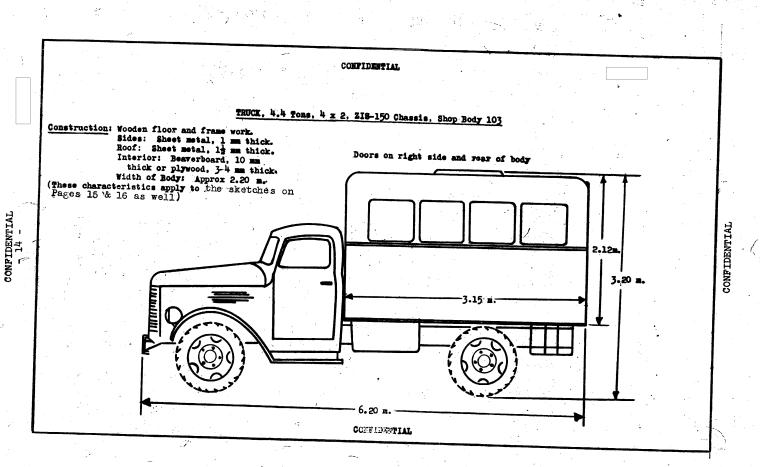
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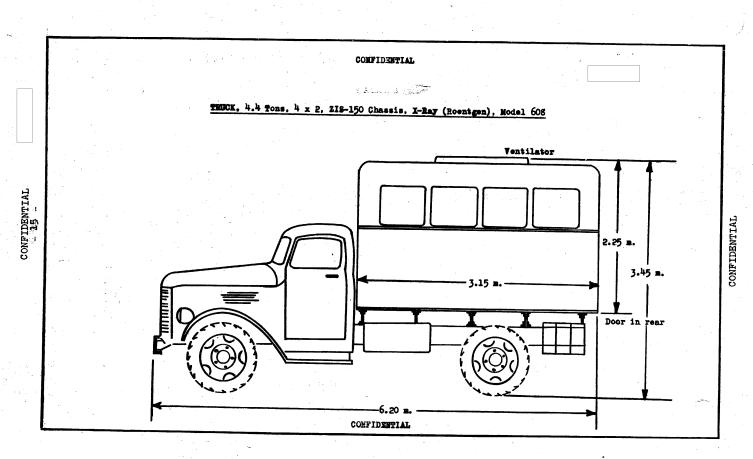
Czechoslovakia, and East Germany.

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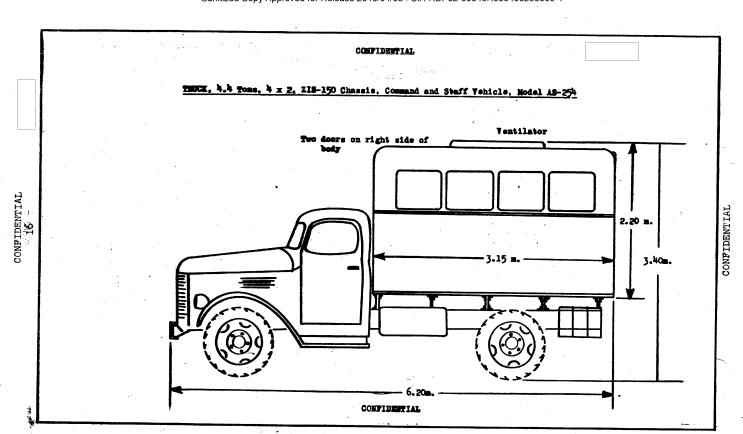
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forces were delivered to the Military Commission #82, attached to and located at the factory, which inspected and subsequently consigned the finished vehicles to various branches of the Polish armed forces.	25X1

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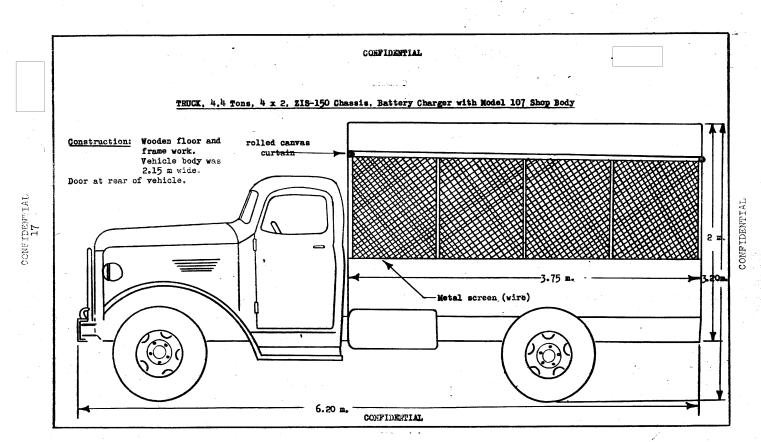


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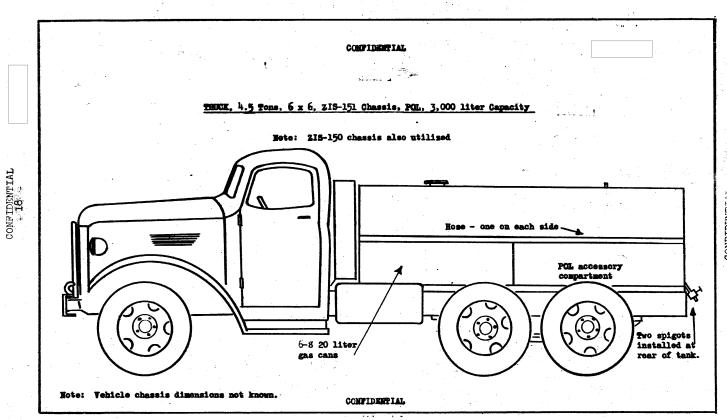
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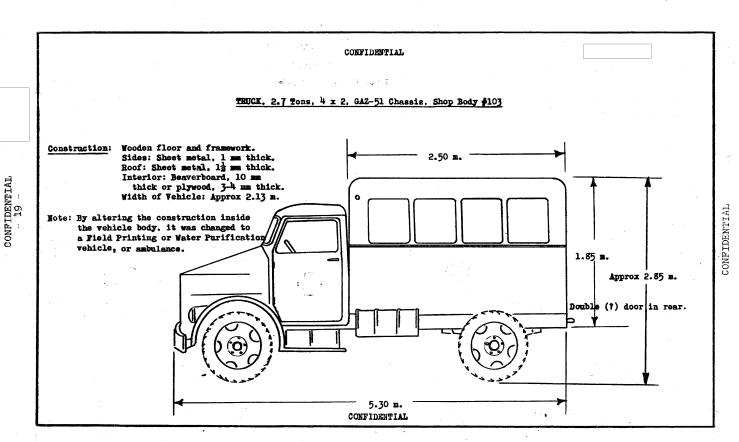
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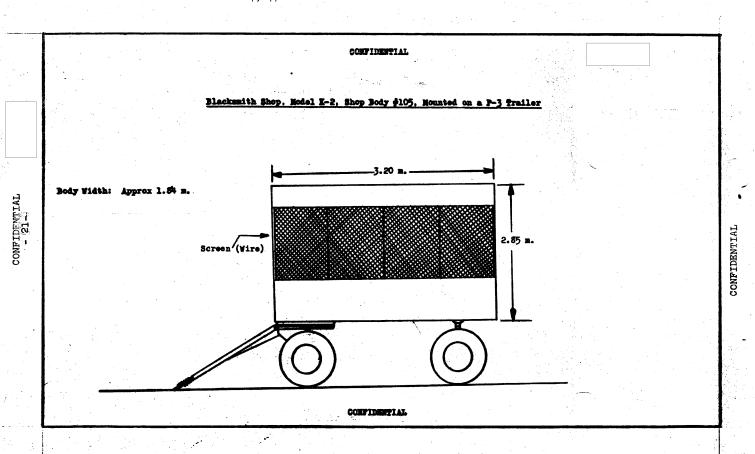
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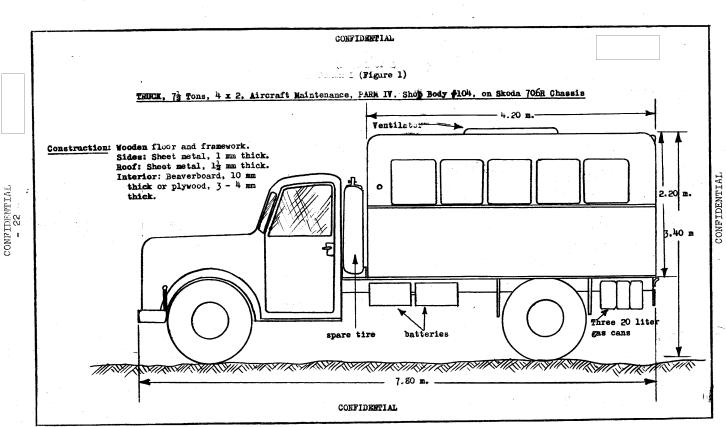
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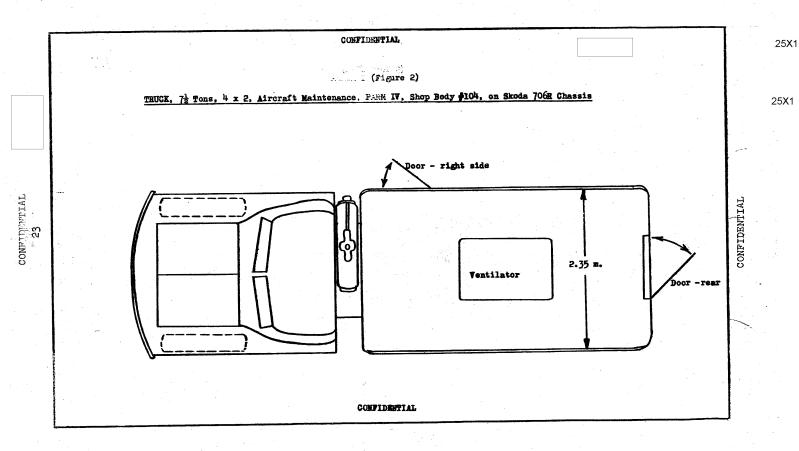
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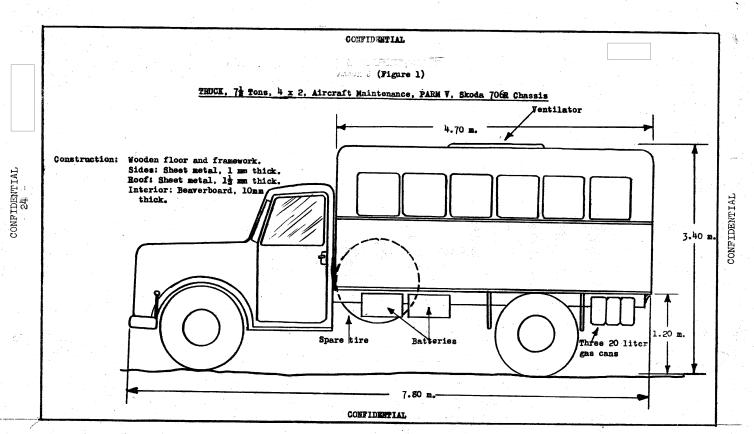
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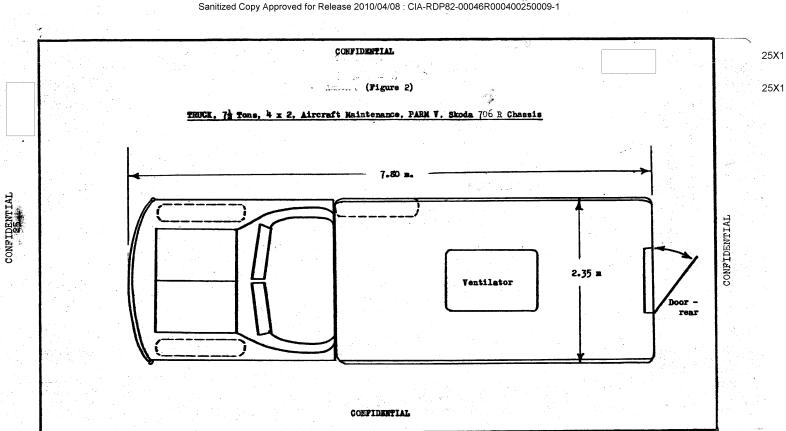
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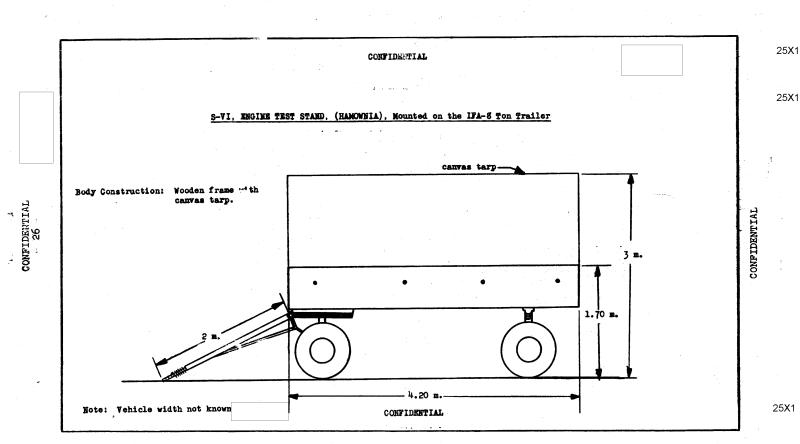


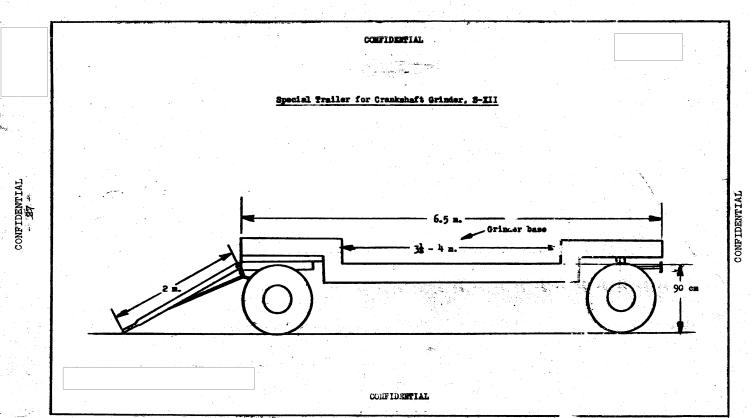


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Resume of Production and Future Production of Vehicles at the JELCE Automobile Factory, JELOZ (JELTSCH) (51018-1719E), Poland Future sembly Assembled Twos and Model of Vehicle 1954 1955 1953 1954 1000 ilnk Unk 12**8**0 POL (See Rage 18) Artillery Maintenance, Model M-I (See Page 14) proto-Unk None Unk type Unk None proto-Unk Artillery Maintenance, Model M-II type (See Parge 14) Unk 48 48 Air Force Automotive Maintenance Unit. lunk Model PARM-II (Consisted of two vehicles (See An Rage) 14) Unk Unk Proto-Unk Chemical Laboratory, Model AL-2 types (See Page 14) Unk Unk Unk 2 Proto Medical Laboratory, Model SI-I types (See Pæge 14) Unk X-Ray (Roentgen), Model 608 (See Page 1)5 Proto Trk Unk types Unk 2 Preto-Unk Unk Air Force Meteorological, Model Unk types (See Page 14) 110 40 Unk Unk Automotive Maintenance, Model 220 (See Rage 14) Unk 15 45 None Radio, Model Unknown (See Page 44) Unk Artillery Automotive Maintenance, Model Unk Unk. 115 222 (See Page 14) Unk Unk 56 Unk Engineer (Sapper) Meintenance, Model 223 (See Page 14) Unk Unk 78 Unk Command and Staff, Model AS-254 (See Page 16) Unk Unk Field Printing Unit, Model Unknown (Unit 1 Proto-Unk type consistedof two vehicles (See Page Unk 72 Unk Unk Tank Maintenance, Model Unk (See Page 14 Unk 117 Unk None Ambulance, Model Unk (See Parge 19) 1 Proto-Unk Field Printing Unit, Model Unk (Unit con-Unk Hone type sisted of two vehicles (See 'page 14) of each vehicle Unk l Proto-Unk None Water Purification, Model Unk (See type Page 19) 45 Unk Unk Bettery Charger, Model Unk (See Page 17) Unk CONFIDENTIAL

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Type and Model of Vehicle	Assembled		Future Assembly	
	1953	1954	1954	1955
Signal Wire and Cable, Model Unk (No Sketch)	Unk	45	Unk	Unk
Automotive Maintenance, Model M-VII (See / (Page's 22 & 23)	Unk	None	4	Unk
Automotive Maintenance, Model M-IX (See Pages 22 & 23)	Unk	None	Ħ	Unk
Aircraft Maintenance Unit, Model PARM IV (See Pgs 23&) Unit consisted of 4 vehicles: 24)				
Vehicle #1, Mechanical, Model 250	Unk	3	Unk	Unk
Vehicle #2, Carpentry, Model 251	Unk	3	Unk	Unk
Vehicle #3, General Aircraft Maintenance, Model 252	Unk	3°	Unk	Unk
Vehicle #4, Mechanical, Model 253	Unk	3.	Unk	Unk
Aircraft Maintenance Unit, Model PARM V (Unit consisted of 5 vehicles) (See Pages 24 & 25)	Unk	None	7 Units	Unk
Trailers:				
Engine Test Stand, IFA-8 (See Page 25)	Unk	Uhk	Unk	Unk
Crankshaft Grinder (See Pages 22 & 23)	Unk	Unk	Unk	Unk
Furnace Trailer (See Page 20)	Unk	Vak	Unik	Unk
Blacksmith Shop, Model K-2 (See Page 21)	Vak	15	Unk	Unk
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*Completed except for installation of equipment in vehicle body.				· ·
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